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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,823	08/19/2003	Meng-Jen Wang	BHT-3183-52	3816

7590 04/19/2004  
BRUCE H. TROXELL  
SUITE 1404  
5205 LEESBURG PIKE  
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EXAMINER

CLARK, JASMINE JHIHAN B

ART UNIT	PAPER NUMBER
2815	

DATE MAILED: 04/19/2004.

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/642,823

Applicant(s)

WANG ET AL.

Examiner

Jasmine J Clark

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-- Th MAILING DATE of this communication app ars on the cov r sh et with the corr spond nce address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 08/19/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 4, 6, 8-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Baba (US 2003/0209808A1).

Baba teaches a device comprising a package substrate 2 having a top surface, a bottom surface and a concave wall between the top surface and the bottom surface, wherein the concave wall defines a chip accommodation space; a first chip 13 having a first surface and a first back surface, wherein the first active surface of the first chip faces to the bottom surface of the package substrate; at least a second chip 11 having a second active surface, a second back surface and a plurality of side surfaces between the second active surface and the second back surface of the second chip 11, wherein the second active surface of the second chip faces to the first active surface of the first

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chip 12; and an underfilling material 5 formed between the first chip 13 and the second chip 11.

Concerning the limitations in claims 2, 4, 6, and 8-15, please see Fig. 2.

***Claim Rejections - 35 USC § 103***

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baba (US2003/0209808 A1).

As per the above discussion, Baba fail to teach wherein the opening is circular or ellipse shape. It would have been an obvious matter of design choice to have a circular or ellipse shape for the opening, since such modification would have involved a mere change in the size/form of a component. A change in size/form is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

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3. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applied reference as applied to claims 1-4, 6, and 8-15 above, and further in view of McCormick (US 6,369,448 B1).

As per the above discussion, the applied reference fails to teach wherein the first chip is a logic chip and wherein the second chip is a memory chip. McCormick teach in column 1, that it was already known to use the logic chip and the memory chip to increase internal bandwidth and access speeds. Hence, it would have been obvious to use a logic chip and the memory chip for the reasons as stated by McCormick.

#### ***References Cited***

4. Similar to the Baba are: Dire et al. (US 6,239,484 B1), Wenzel et al. (US 6,150,724), Yu et al. (US 6,100,593), Kelkar et al. (US 6,084,308), Degani et al. (US 5,869,894), Tsukagoshi et al. (US 5,804,882), Ahmad et al. (US 5,790,384), and Bozso et al. (US 5,760,478).

#### ***Telephone Inquiry Contacts***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine J Clark whose telephone number is (571) 272-1726. The examiner can normally be reached on Flex.

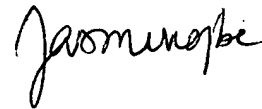
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jjbc/04/14/04

**JASMINE CLARK  
PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read "Jasmine Clark", is written below the printed name.